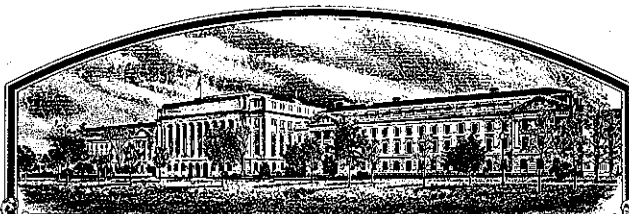


No.

9300303



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Mrs. Fred C. & Nancy A. Elliott

Whereas, THERE HAS BEEN PRESENTED TO THE

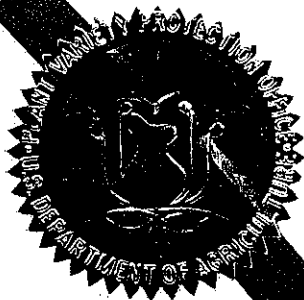
Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF EIGHTEEN YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

TRITICALE

'Companion'



In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this thirty-first day of July in the year of our Lord one thousand nine hundred and ninety-eight.

Attest:

Thomas A. Salt

Acting Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Wm. H. Hildner

Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE DIVISIONAPPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(INSTRUCTIONS ON REVERSE)

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) (as it is to appear on the Certificate) Drs Fred C. and Nancy A. Elliott		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NO. 7-1-3		3. VARIETY NAME Companion	
4. ADDRESS (street and no. or R.F.D. no., city, state, and ZIP) 1084 Angus Way, Yuma AZ 85364 Box 233, Ottertail MN 56571		5. PHONE (include area code) 602-782-3979 (Oct. - March) 218-367-2389 (Apr. - Sept.)		FOR OFFICIAL USE ONLY PVPO NUMBER 9300303	
6. GENUS AND SPECIES NAME X Triticosecale Wittmack		7. FAMILY NAME (Botanical) Gramineae		Filing and Examination Fee: \$ 2,325.00	
8. CROP KIND NAME (Common Name) Spring Triticale		9. DATE OF DETERMINATION August, 1989		Date Sept. 17, 1993 Time 10:15 <input checked="" type="checkbox"/> A.M. <input type="checkbox"/> P.M.	
10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.)				Filing and Examination Fee: \$ 2,325.00 Date Sept. 2, 1993	
11. IF INCORPORATED, GIVE STATE OF INCORPORATION		12. DATE OF INCORPORATION		Certificate Fee: \$ 300.00 Date July 24, 1998	
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS					

PHONE (include area code):

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow INSTRUCTIONS on reverse)	
a. <input checked="" type="checkbox"/> Exhibit A, Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B, Novelty Statement c. <input checked="" type="checkbox"/> Exhibit C, Objective Description of Variety d. <input checked="" type="checkbox"/> Exhibit D, Additional Description of Variety e. <input checked="" type="checkbox"/> Exhibit E, Statement of the Basis of Applicant's Ownership f. <input checked="" type="checkbox"/> Seed Sample (2,500 viable untreated seeds). Date Seed Sample mailed to Plant Variety Protection Office 8-30-93 g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$2,325) made payable to "Treasurer of the United States"	
15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See section 83(a) of the Plant Variety Protection Act) <input type="checkbox"/> YES (If "YES," answer items 16 and 17 below) <input checked="" type="checkbox"/> NO (If "NO," skip to item 18 below)	
16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> YES <input type="checkbox"/> NO	17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED
18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S. <input type="checkbox"/> YES (If "YES," through <input type="checkbox"/> Plant Variety Protection Act <input type="checkbox"/> Patent Act. Give date: _____). <input checked="" type="checkbox"/> NO	
19. HAS THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES? <input checked="" type="checkbox"/> YES (If "YES," GIVE NAMES OF COUNTRIES AND DATES) <input type="checkbox"/> NO 1993, USA as an unnamed component in "Tripper" forage mix	
20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.	

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in section 41, and is entitled to protection under the provisions of section 42 of the Plant Variety Protection Act.

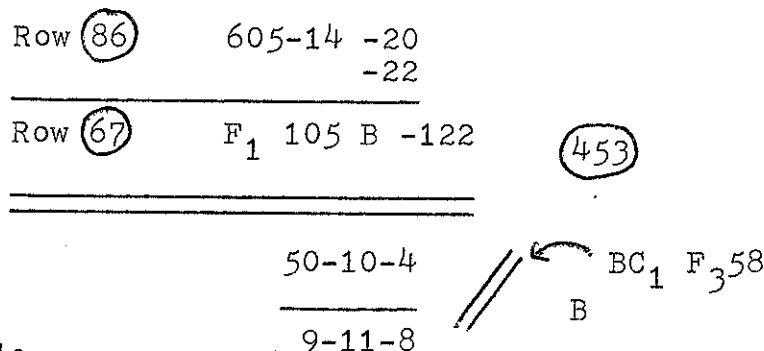
Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT [Owner(s)] Fred C. Elliott	CAPACITY OR TITLE Plant Breeder	DATE 8-27-93
SIGNATURE OF APPLICANT [Owner(s)] Nancy A. Elliott	CAPACITY OR TITLE Assoc. Plant Breeder	DATE 8-27-93

Exhibit A: Origin and Breeding History of "Companion" Triticale

The variety "Companion" was produced by the pedigree system of breeding through a series of crosses involving F_1 's and BC_1 , F_3 's. The final cross was made in 1979 in Minnesota by Fred C. Elliott.

Pedigree:



605-14 = Nutricale
B-122 = Beagle Sel.
B = Beagle

- F₁ was grown out as spaced plants in Yuma, Arizona, winter 1980.
F₂ of these were grown out as spaced plants in MN 1980, and the plant -2 was selected.
F₃ of the select plant -2 was grown in winter in Yuma in 1981.
F₄ row 107, a selection from F₃ -2, was grown in Minnesota, 1981.
F₅ The selection 25-107 from this row was grown out in Yuma in the winter of 1982.
F₆ The selection 7-1 was taken from this row in the winter of 1983 and grown in Yuma.
F₇ The selection 7-1 was grown out in Minnesota in 1984.
The F₈, F₉, and F₁₀ and F₁₁ were grown in Minnesota in the summers of 1985, 86, 87 and 88.
F₁₂ Selected spaced plants from 7-1 were grown in Yuma in the winter of 1989. Selected plants were made from these.
F₁₃ The selection 7-1-3 was grown in Minnesota in 1989 and was found to be a uniform and distinct line. It was later named "Companion" in 1991. It was an F₁₂ sister selection to 7-1-4, which became "Plains."
- Since 1989 the line 7-1-3, Companion, has been grown in 8 additional cycles in Yuma, Arizona and Ottertail, Minnesota and has been found to be uniform. Short ~~offtypes~~ with dense spikes and shrivelled seed occur in less than 1:50,000 plants. *i.e. variants - AAA per documentation passim, 18 Dec 1996*

9300303

Exhibit A: Origin and Breeding History of Companion Triticale

The variety "Companion" resulted from a program of breeding triticales for fast early growth, large leaves, tallness, and plump kernels. Individual plant selections were made on the basis of these characteristics.

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Exhibit B: Novelty Statement

'Companion' is a tall spring triticale characterized by rapid early elongation and copious vegetative growth up to boot stage.

'Companion' most closely resembles 'Buxom' ('Buffalo'), PVP No. 9300306. 'Companion' differs from 'Buxom' in in boot-stage and mature heights and in the seed's phenol reaction color.

'Companion' is taller than 'Buxom' at boot stage and at maturity. At Ottertail, MN in 1992 and 1993 'Companion' had boot-stage heights of 78.6 cm and 80.2 cm respectively compared to 'Buxom''s 66.8 cm and 72.4 cm. In the same tests for 1992 and 1993 'Companion' attained a mature height of 122.1 cm and 122.4 cm respectively, as compared to 'Buxom''s mature heights of 110.8 cm and 112.6 cm. (See data, next 2 pages.)

In the Walls standardized phenol reaction test seed of 'Companion' stained brown, and seed of 'Buxom' stained brown-black. (See photos, last page.)

28 7M 30 11 20

0200 11 20 11

MN 92

4300303

Spring Triticale
Ottentail, MN 1992

Bort Stage: 10 random Hts 5-1-92

Bu Co Ke No Os Pat Pl

55 79 69 70 49 42 69

60 80 72 68 60 51 69

71 73 70 77 55 60 86

77 83 70 80 54 55 85

72 77 65 83 49 53 74

62 81 68 79 50 56 75

68 76 80 75 61 49 80

66 76 76 79 66 64 81

69 82 78 80 56 66 75

68 81 77 81 58 62 69

66.8 79.8 72.5 77.2 55.8 55.8 76.3

Mature Hts: 10 random Hts 8-1-92

Bu Co Ke No Os Pat Pl

98 118 126 128 78 94 94

112 130 123 124 83 101 115

113 119 122 131 88 108 114

116 121 118 125 90 103 120

109 120 127 129 79 100 119

111 120 129 127 81 88 98

109 124 119 130 80 93 90

110 126 120 129 77 97 120

100 121 125 132 89 96 117

110 122 121 126 90 84 89

110.8 122.1 123.0 128.1 83.5 105.7 107.6

Days to Heading

Bu Co Ke No Os Pat Pl

60 62 55 61 54 57 61

1993

April 30, May 30

Plant Heights at Boot Stage
Compassion Nursery
Ottentail MN nursery

<u>Ar</u>	<u>Ba</u>	<u>Bu</u>	<u>Co</u>	<u>Fr</u>	<u>Ka</u>	<u>Ke</u>	<u>No</u>	<u>Os</u>	<u>Par</u>	<u>Pl</u>	<u>GTA 204</u>
63	32	65	88	58	-	58	-	56	58	75	-
70	30	75	79	-	-	57	82	52	-	88	-
58	50	80	74	54	57	59	84	58	42	68	-
-	54	74	89	47	-	69	68	59	50	68	-
71	43	72	75	-	67	72	77	57	52	-	33
50	-	75	73	50	54	65	68	50	60	86	-
55	-	65	84	50	-	65	80	65	48	77	-
63	45	80	77	-	53	-	79	60	55	77	-
-	45	66	83	54	-	59	67	50	-	88	-
x 61.4	42.7	72.4	80.2	52.1	58	63	75.6	56.3	52.1	78.3	33

Nts at Maturity

July 30, 1993

Plant Heights at
Maturity
Compassion Nursery
Ottentail

<u>Ar</u>	<u>Ba</u>	<u>Bu</u>	<u>Co</u>	<u>Fr</u>	<u>Ka</u>	<u>Ke</u>	<u>No</u>	<u>Os</u>	<u>Par</u>	<u>Pl</u>	<u>GTA 204</u>
65	70	109	128	98	-	120	-	77	101	115	-
73	61	117	125	-	-	118	132	76	-	121	-
60	56	118	120	88	80	120	133	81	94	115	-
-	66	116	126	72	-	126	126	83	89	114	-
74	57	112	120	-	86	129	131	75	85	-	(died)
55	-	99	119	71	70	123	129	69	94	119	-
59	-	119	124	74	-	122	131	79	88	114	-
66	58	110	121	-	69	-	128	78	90	115	-
-	57	114	120	80	-	124	127	69	-	119	-
64.6	60.7	112.6	122.4	80.5	76	122.7	129.6	76.3	91.5	116.5	-

Days To Heading

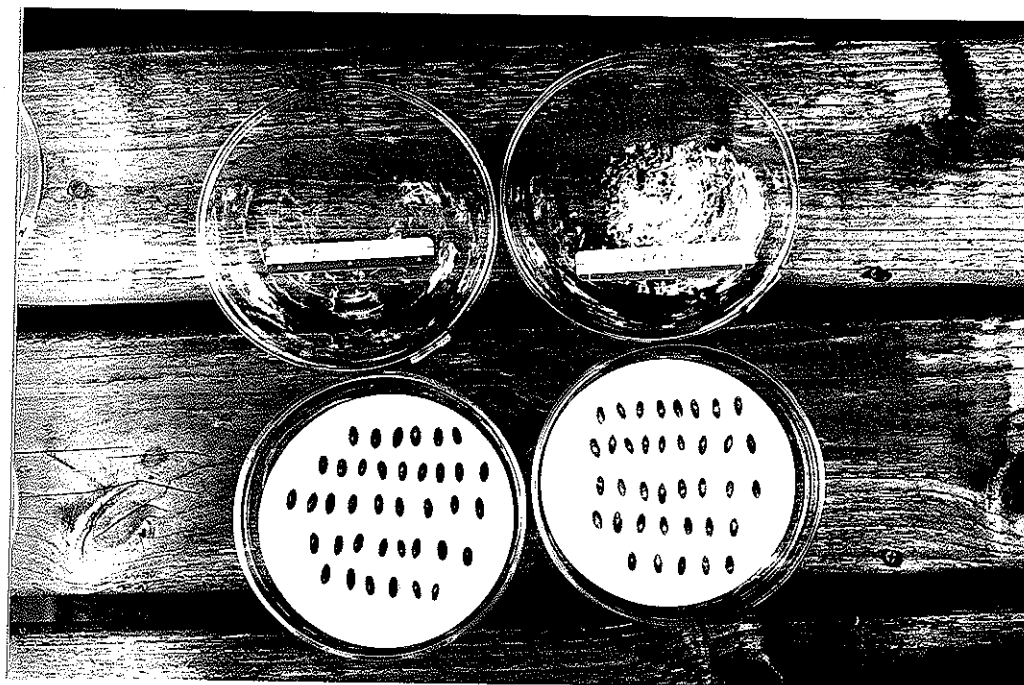
<u>Ar</u>	<u>Ba</u>	<u>Bu</u>	<u>Co</u>	<u>Fr</u>	<u>Ka</u>	<u>Ke</u>	<u>No</u>	<u>Os</u>	<u>Par</u>	<u>Pl</u>	<u>GTA 204</u>
56	80	69	71	81	60	56	70	59	57	70	81

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WALLS STANDARDIZED PHENOL REACTION COLORS



'Companion' and 'Buxom' after 1.2 hours; 1% phenol solution



'Buxom' and 'Companion' after 2.0 hours; 1% phenol solution

GRAIN DIVISION
HYATTSVILLE, MARYLAND 20782
OBJECTIVE DESCRIPTION OF VARIETY

TRITICALE

NAME OF APPLICANT(S) Drs Fred C. and Nancy A. Elliott	VARIETY NAME OR TEMPORARY DESIGNATION Companion (7-1-3)
ADDRESS (Street and No., or F.F.D. No., City, State, and ZIP Code) 1084 Angus Way, Yuma AZ 85364 (Oct-March) Box 233, Ottertail MN 56571 (Apr-Sept.)	FOR OFFICIAL USE ONLY PVPO NUMBER 9300303

Place the appropriate number that describes the varietal character of this variety in the boxes below.

Place a zero in first box (e.g., **089** or **09**) when number is either 99 or less or 9 or less.

1. GROWTH HABIT:

1	1 = SPRING	2 = INTERMEDIATE	3 = WINTER	
3	Juvenile Plant Growth:	1 = PROSTRATE	2 = SEMIPROSTRATE	3 = ERECT
1	Photoperiod:	1 = INSENSITIVE	2 = SENSITIVE	

2. PLOIDY:

1	1 = HEXAPLOID	2 = OCTOPLOID	3 = OTHER (Specify) _____
42	2n CHROMOSOME NUMBER		

3. MATURITY (50% Flowering):

3	1 = VERY EARLY	2 = EARLY	3 = MIDSEASON	4 = LATE	5 = VERY LATE		
09	DAYS EARLIER THAN			2	1 = CARMACK	2 = ROSNER	3 = PATHFINDER
15	DAYS LATER THAN			5	4 = 6TA 204	5 = ARMADILLA	

4. HEIGHT:

122	CM. HIGH	5	1 = DWARF	2 = SEMIDWARF	3 = SHORT
00	CM. SHORTER THAN	0	4 = MIDTHALL	5 = TALL	
43	CM. TALLER THAN	5	1 = CARMACK	2 = ROSNER	3 = PATHFINDER
			4 = 6TA 204	5 = ARAMADILLA	

5. PLANT COLOR AT BOOT STAGE:

2	1 = YELLOW GREEN	2 = GREEN	3 = BLUE GREEN
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6. STEM:

1	Anthocyanin:	1 = ABSENT	2 = PRESENT		
3	Neck Hairiness:	1 = NONE	2 = SLIGHT	3 = MODERATE	4 = HEAVY
1	Shape Of Neck:	1 = STRAIGHT	2 = WAVY	3 = OTHER (Specify) _____	

7. LEAVES:

2	Flag Leaf:	1 = NOT TWISTED	2 = TWISTED	32	CM. LEAF LENGTH: 1st Leaf Below Flag Leaf	
1	Waxy Bloom On Leaf At Boot:	1 = ABSENT	2 = PRESENT	15	MM. LEAF WIDTH: 1st Leaf Below Flag Leaf	
3	Leaf Carriage:	1 = UPRIGHT	2 = RECURVED	1	Auricle Color: 1 = COLORLESS OR WHITE	2 = PURPLE
		3 = DROOPING			3 = OTHER (Specify) _____	

8. HEAD:

<input type="checkbox"/> 1	Density:	1 = LAX	2 = MIDDENSE	3 = DENSE		
<input type="checkbox"/> 2	Shape:	1 = FUSIFORM	2 = OBLONG	3 = CLAVATE	4 = ELLIPTICAL	5 = OTHER (Specify) _____
<input type="checkbox"/> 4	Awedness:	1 = AWNLESS	2 = APICALLY AWNLETTERED	3 = AWNLETTERED	4 = AWNED	
<input type="checkbox"/> 3	Awn Color:	1 = WHITE	2 = YELLOW	3 = TAN	4 = BROWN	5 = BLACK
<input type="checkbox"/> 1	<input type="checkbox"/> 3	CM. HEAD LENGTH		<input type="checkbox"/> 1	<input type="checkbox"/> 0	MM. HEAD WIDTH

9. GLUMES AT MATURITY:

<input type="checkbox"/> 2	Pubescence:	1 = GLABROUS	2 = SLIGHTLY PUBESCENT	3 = PUBESCENT		
<input type="checkbox"/> 3	Color:	1 = WHITE	2 = YELLOW	3 = TAN	4 = BROWN	5 = BLACK
<input type="checkbox"/> 3	Length:	1 = SHORT	2 = MIDLONG	3 = LONG	<input type="checkbox"/> 1	Width: 1 = NARROW 2 = MIDWIDE 3 = WIDE
<input type="checkbox"/> 2	Shoulder:	1 = WANTING	2 = OBLIQUE	3 = ROUNDED	<input type="checkbox"/> 3	Beak: 1 = OBTUSE 2 = ACUTE 3 = ACUMINATE
		4 = SQUARE	5 = ELEVATED	6 = APICULATE		

10. COLEOPTILE COLOR:

<input type="checkbox"/> 3	1 = WHITE	2 = GREEN	3 = PURPLE
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11. SEED:

<input type="checkbox"/> 1	Shape:	1 = OVATE	2 = OVAL	3 = ELLIPTICAL			
<input type="checkbox"/> 1	Smoothness:	1 = SMOOTH	2 = SLIGHTLY WRINKLED	3 = WRINKLED			
<input type="checkbox"/> 2	Brush Area:	1 = SMALL	2 = MIDSIZE	3 = LARGE			
<input type="checkbox"/> 2	Brush Length:	1 = SHORT	2 = MIDLONG	3 = LONG			
<input type="checkbox"/> 3	Phenol Reaction:	1 = IVORY	2 = FAWN	3 = LIGHT BROWN	4 = BROWN	5 = BROWN BLACK	
<input type="checkbox"/> 6	Color:	1 = WHITE	2 = AMBER	3 = RED	4 = PURPLE	5 = BLACK	6 = OTHER (Specify) <u>tan</u>
<input type="checkbox"/> 6	<input type="checkbox"/> 3	GMS. PER 1,000 SEED					

12. DISEASE (0 = Not Tested, 1 = Susceptible, 2 = Resistant, 3 = Tolerant):

<input type="checkbox"/> 0	STEM RUST (Races) _____	<input type="checkbox"/> 0	LEAF RUST (Races) _____
<input type="checkbox"/> 0	STRIPE RUST (Race) _____	<input type="checkbox"/> 2	ERGOT
<input type="checkbox"/> 0	POWDERY MILDEW _____	<input type="checkbox"/> 0	BACTERIAL STRIPE
<input type="checkbox"/> 0	SEPTORIA	<input type="checkbox"/> 0	YELLOW DWARF
<input type="checkbox"/> 0	OTHER (Specify) _____	<input type="checkbox"/> 0	OTHER (Specify) _____

13. INSECT (0 = Not Tested, 1 = Susceptible, 2 = Resistant, 3 = Tolerant):

<input type="checkbox"/> 0	GREENBUG	HESSIAN FLY RACE:							
<input type="checkbox"/> 0	CEREAL LEAF BEETLE	<input type="checkbox"/> 0	GP	<input type="checkbox"/> 0	A	<input type="checkbox"/> 0	B	<input type="checkbox"/> 0	C
<input type="checkbox"/> 0	OTHER (Specify) _____	<input type="checkbox"/> 0	D	<input type="checkbox"/> 0	E	<input type="checkbox"/> 0	F	<input type="checkbox"/> 0	G

14. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	VARIETY
PLANT TILLERING	Plains
WINTER HARDINESS	—
AREA OF ADAPTATION	Plains
SEED SHAPE	Plains

REFERENCES:

L. W. Briggie and L. P. Reitz, 1963, Classification of Triticum Species and Wheat Varieties Grown in the United States, Technical Bulletin 1278, USDA.

W. E. Walls, 1965, A Standardized Phenol Method for Testing Wheat Seeds for Varietal Purity, Contribution No. 28 to the handbook of seed testing prepared by the Association of Official Seed Analysts.

COMMENTS:

Exhibit D. Additional Description of Companion.

Companion is a tall spring triticale characterized by rapid early vegetative growth, long leaves, spikes, and large seed.

After seeding on April 30, 1993 at Ottertail, MN, 50% heading occurred at 71 days. Ripening occurred at approximately 100 days.

The coleoptile has a purple anthocyanin streak extending vertically. Seedling color is also pinkish-purple, similar to Plains.

Companion has a mature height of 122 cm, approximately 5 cm taller than Plains. Leaves are 6 cm longer than Plains, giving Companion a slightly leafier appearance. Stems are hollow and both stem and auricle lack anthocyanin. As with Plains, there is no waxy bloom visible on leaf surface, but waxy bloom appears on the lowest leaf shaft after flowering. The neck is straight and moderately hairy in an area extending about 4 cm below the spike, as with Plains.

Spikes are oblong and about 1 cm longer than Plains spikes, and they have 12 to 13 spikelets rather than 11 to 12.

Companion glumes are tan, as with Plains, and slightly longer (Companion = 11 mm, Plains = 8 mm), but the same width as Plains. Pubescence is confined to margins of glume and lemma as in Plains. The beak and shoulder are like Plains: beak is acuminate and shoulder is oblique with a slight anthocyanin area that fades after flowering. Anther color is also cream.

Awns of Companion are longer and more persistent than awns of Plains. They are approximately 10 cm long and are held at a greater angle to the spike, causing Companion spikes to have a more bristled appearance.

Seeds of Companion are larger (1,000 = 63g) than Plains (1,000 = 59g), and smoother. The seed shape is also ovate. The

The crease is narrower and cheeks less angular than in Plains. Seed length is 10mm, width is 3.4 mm. (Plains length = 9 mm, width 3.0 mm.) Brush area and length are medium as with Plains. The seed color is a slightly paler tan than in Plains and more uniform, lacking the grayish undertone of Plains seed. The phenol reaction color is lighter brown than Plains and lacks the blackish tones at the base and tip of the seed.

Companion has field resistance to Upper Midwestern races of stem and leaf rust and resistance to ergot.

Exhibit D.

Plains and Companion: Kernel Comparison and Phenol Reaction.

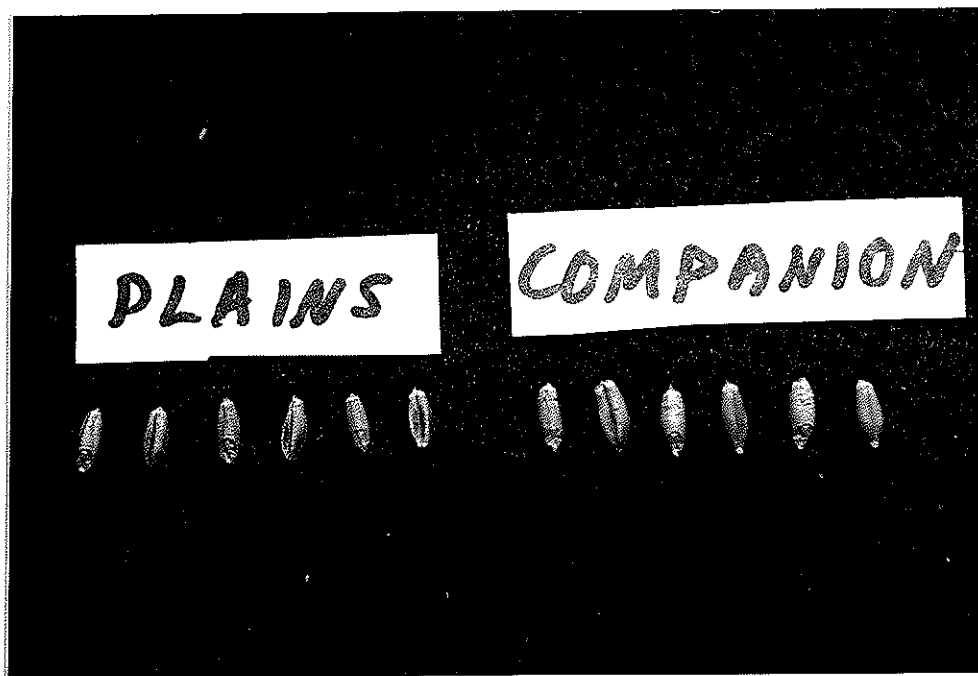


Exhibit D.

Seed of Plains and Companion

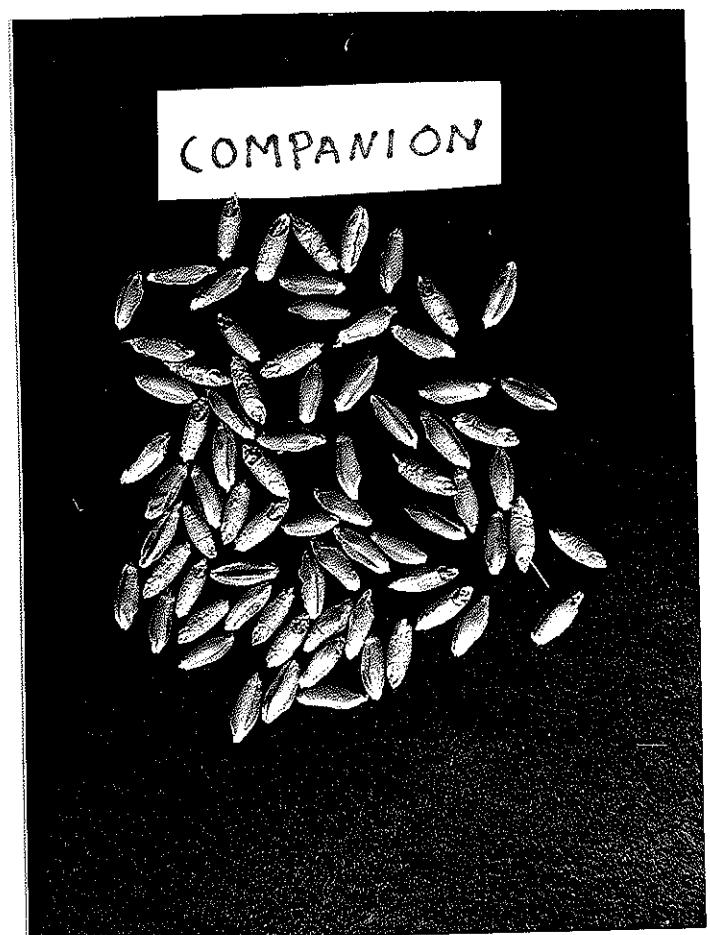
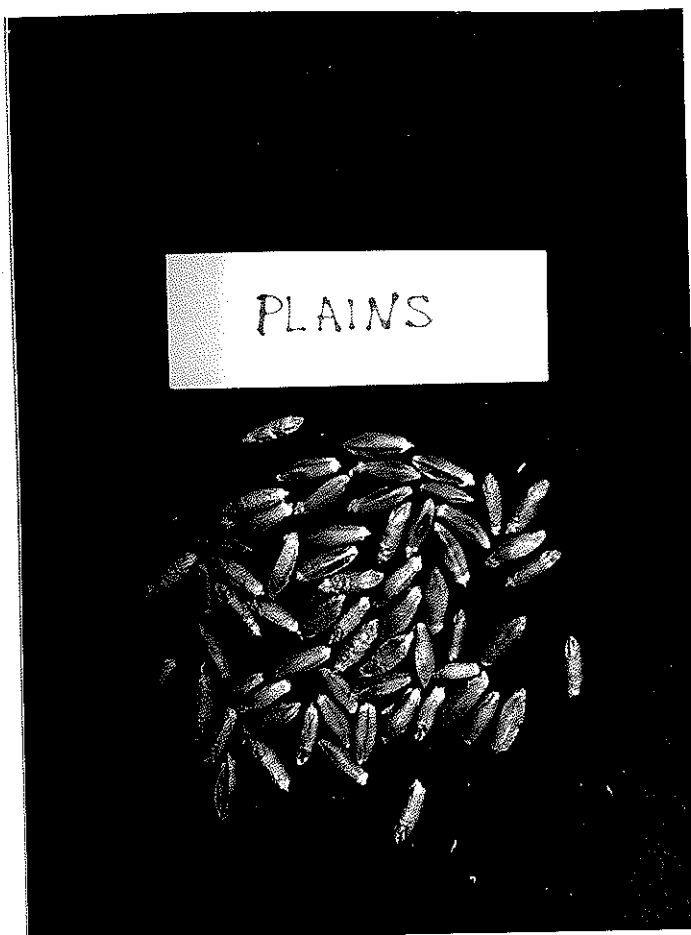
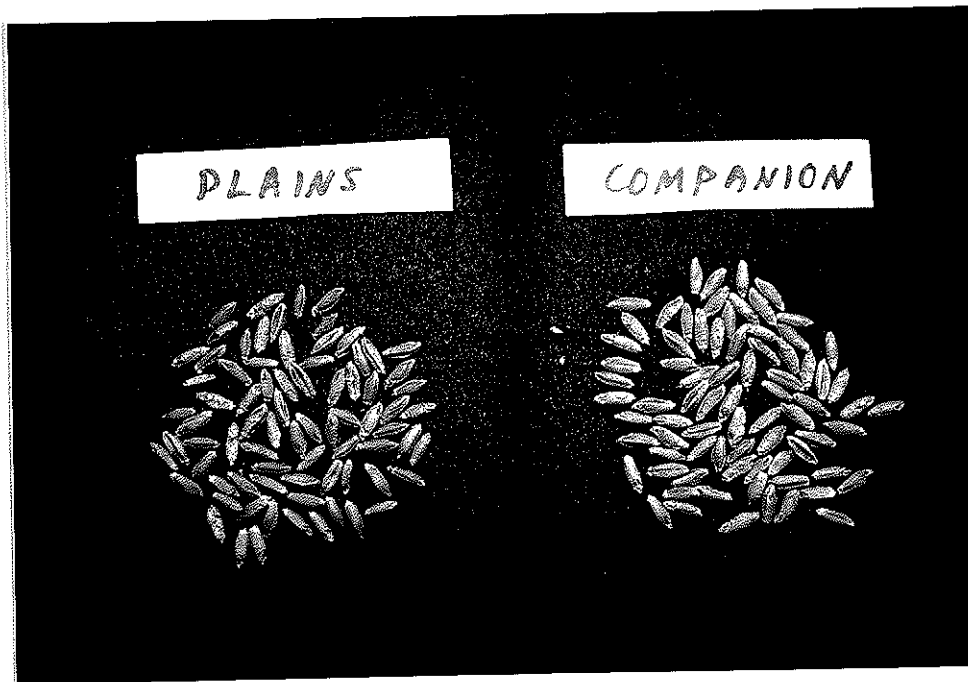


Exhibit D.

Companion (left) and Plains (right) at Flowering and Late
Maturity

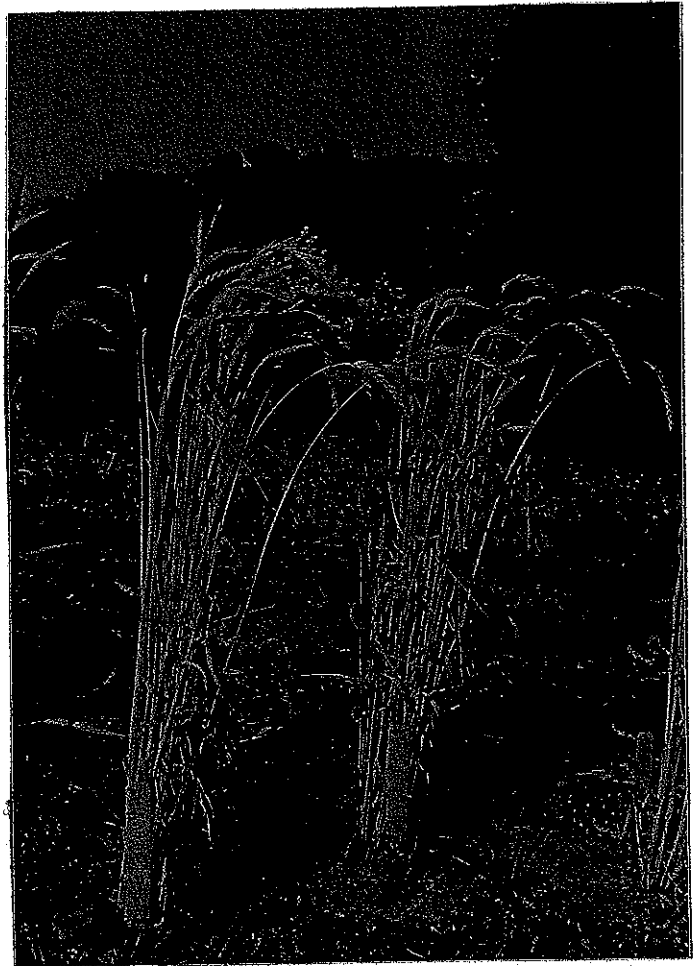
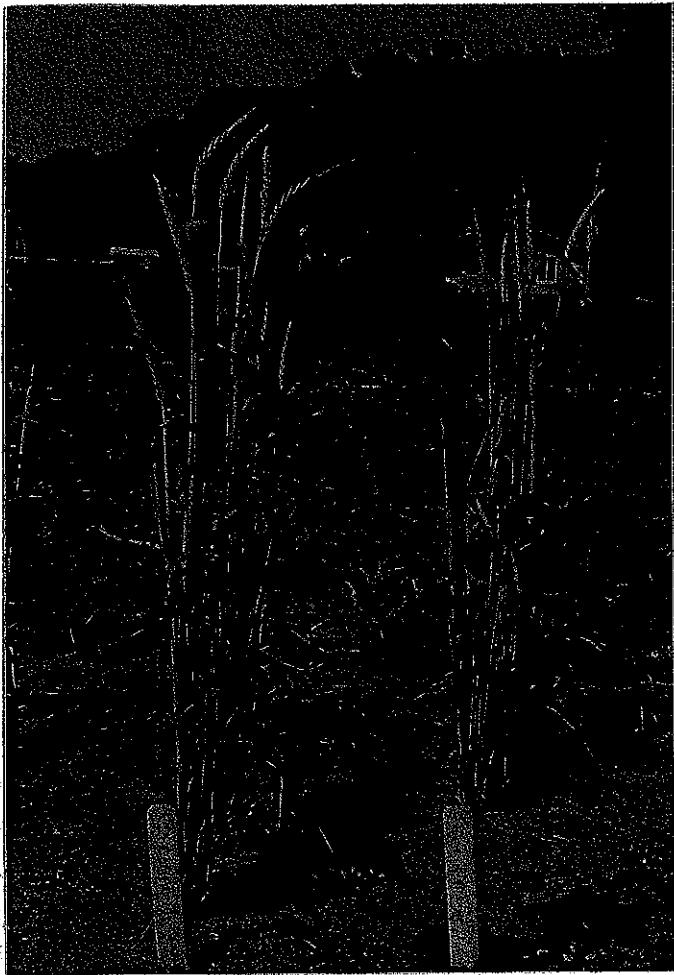


Exhibit D.

Spikes of Plains and Companion

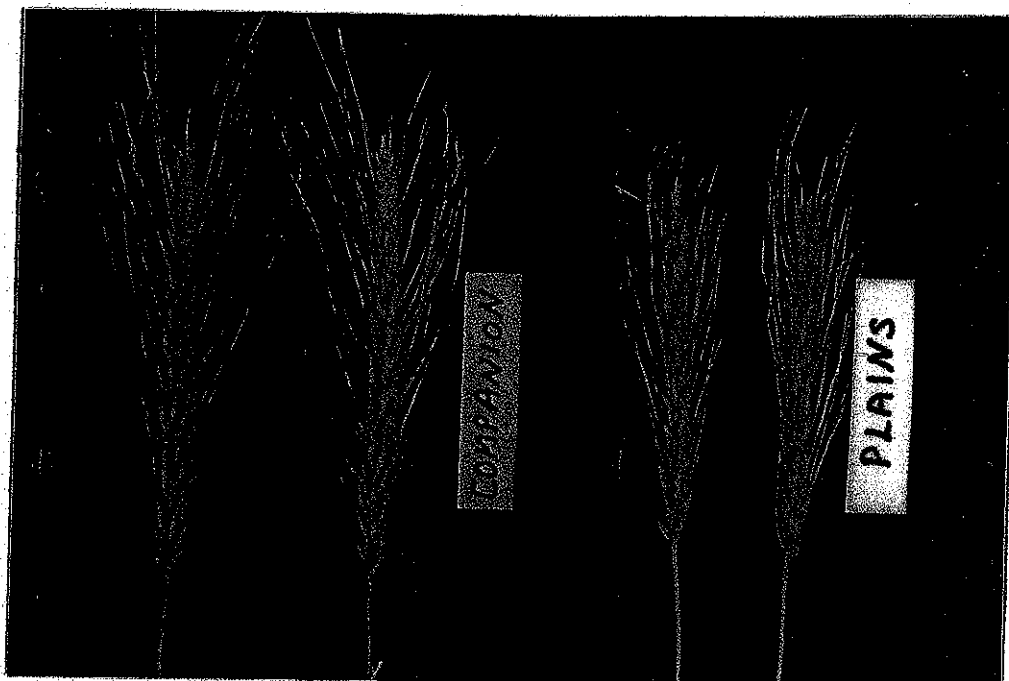


Exhibit E. State of the Basis of Applicants' Ownership

The variety 'Companion' for which Plant Variety Protection is sought was developed by Dr. Fred C. Elliott, Elliott Plant Breeding, of which Dr. Nancy A. Elliott is the collaborator. All rights of ownership remain with Elliott Plant Breeding.